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ABSTRACT

The European Training Foundation's Advisory Forum established four working groups, one of which was to conduct activities relating to new National Vocational Education and Training (VET) Standards. The 1995 working session accepted definitions of VET Standards and described three models. The 1996 working session decided on a checklist of steps to develop a standard. The 1997 working session worked out strategies for implementation of standards. The objective for 1998 was to develop an empirical evaluation/progress review of pilot projects for VET Standards. A questionnaire was circulated among members of the subgroup to evaluate the procedure of standard development and implementation in member and partner countries. It followed results of the group's work starting with models of standards, development steps, and implementation procedure. Sixteen partner and European Union Member States responded. Findings indicated the following: school-based VET systems were most prevalent; they combined classroom teaching with demonstrations and performance of work tasks in workshops and laboratories; the traditional VET Standard model was the occupation model; the ministry of education took the initiative for VET Standard setting in two-thirds of the states; and all countries referred to the five categories of VET Standards the group defined. Current activities in the Russian Federation, Ukraine, Macedonia, and Germany were examined. Ways to measure labor market needs were identified. (YLB)

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European Training Foundation

Subgroup C

EXPERT REPORT

THE EVALUATION/PROGRESS REVIEW OF VET- STANDARDS

1998

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1. New Vocational Education and Training (VET) – Standards - an international agenda

1.1. What are Vocational Education and Training Standards?

New National VET-Standards have become the education sector's global response to fundamental changes. Considering EU-partner states, the countries of the former "Eastern Bloc", and EU-member states, the dimension of these changes differs widely. While partner states have to transform their VET-systems as a whole, EU-member countries "only" have to modernise their systems, to review their standards and develop new standards for emerging labour markets. Nevertheless, there is one common problem: How to set new VET-standards that are led by the needs of the young generation and the needs of employers and modern workplaces as well?

In the international discussions there is a lot of misunderstanding about the term "standard". In order to achieve a common understanding subgroup C "VET-standards" uses the ETF-glossary which outlines on "standard of education":

"The extent to which the education system meets what is expected of it. This may be in terms of quality of teaching, the content of learning..... Vocational education standards **tend to be used as the basis for curriculum design and education and training delivery.** Occupational standards **tend to be used to specify what is required of people at work. Increasingly the distinction between the two is being eroded as standards are developed to integrate education and training outputs with the requirements of the world of work. Either may be used as** qualification standard."

VET-standards in sub group C's understanding "apply to a wide set of work roles across the economy. They are broadly based and they represent measures of the extent to which an individual can meet the demands of performance. **National Vocational Education Standards** are those set for all practitioners within a specific occupation in a country" (ETF-glossary).

1.2. What challenges are the reasons to develop new VET-Standards?

The impact of information and communication technologies on work organisations and private life, innovations in the delivery of services, the change in the international framework of national economies onto the fundamental changes of the political and economic systems of the transformation states in central and eastern Europe and the former Soviet Union has urged all countries to revise their VET-standards or occupational classifications or develop a new system of occupations and standards.

What used to be a frequent national procedure of reviewing and modernising VET curricula, a task for educators and restricted to their field of influence, has now become a global endeavour with economists, labour market specialists, employers, trade unions, international organisations and researchers involved. The already mentioned transformation processes in the former eastern bloc, the unification of Europe and the North American Free Trade Agreement (NAFTA) challenge the flexibility and mobility of the workforce together with changing requirements in human capabilities like communication skills, customer orientation, qualitative performance and delivery.

Within companies the loss of hierarchic layers through „lean" re-engineering, the demand for more efficiency and cost cutting called for more and better education and training which were not to be met by the old narrow occupations or fragmented jobs.

The new set of requirements for skilled workers or employees goes far beyond the average skill profiles in a taylorised work organisation: *language (communication skills) and mathematics (use of numbers)* have become important occupational skills for the majority of occupations because they are the prerequisite to master the common tool across the workforce: the computer. A broader intellectual base for VET is required since the skilled worker or employee is expected *to plan, carry out and control his/her work tasks autonomously.* It has to be stated here, that the perception of VET in the former eastern bloc states has always been emphasising much more on general education within VET occupations than it was the rule in western countries. This advantage can be used for a better and new understanding of standard setting with vocational and general education elements.

The dynamic of change has forced employers to recognise that their work force's ability to adapt to changes and to master new tasks and challenges results from a broad theoretical and practical basic and recurrent education. They attach much more value to a worker's ability to learn how to learn than the mastery of traditional skills.

In the actual debate on the reform of VET in Europe, east and west, the problem of a mutual recognition of VET certificates has been playing a major role. This discussion had begun in the early eighties within the European Community but soon was brought to an end when member states agreed that only *regulated professions* were to be recognised. This only concerned academic professions. Given the very different VET systems in Europe the attempt to develop a common classification of European VET Standards proved to be impossible: The very different VET-systems did not allow mutual recognition within very different economic and educational contexts. Beginning in 1985 CEDEFOP has managed within a decade, together with tripartite expert groups from all member states, to compare the different occupational classifications and occupational profiles of the EU countries to a large extent. This was an important progress for VET development in Europe because there is now much more transparency and knowledge about VET standards and occupational classifications. But this work lead to the conclusion not to grant the recognition of certificates on skilled workers' level in Europe. Bilateral recognition for a number of occupations as between France and Germany or Germany and Austria remain exceptions from the rule

In order to establish a network of VET information like CEDEFOP has developed for EU member states ETF has helped central and eastern European countries and the New Independent States to create *observatories* which — among other duties — collect data to identify criteria for converging curriculum and standard development work with the Union.

Thus, a network of co-operating national partners could help to develop a comparative methodology to validate standards.

The redesigning of VET systems and occupational standards is obviously increasing the status of VET and enhancing parity of esteem. The relationship of general and vocational education and training is widely discussed, since the definition of „general" education and „basic vocational education" has become more difficult than before because the boundaries are blurring. The conceptual and theoretical content of VET is growing since knowledge is soon becoming obsolete. Therefore, one of the most difficult tasks of curriculum development and standard setting in VET is the definition of the basic skills and knowledge or the fundament for an occupational family i.e. technical occupations, business, health care.

In most EU-partner countries governments still play the decisive role as it comes to the definition of labour market needs, to define, develop and implement new VET standards and to break up old classifications. The role of employers and trade unions as government partners in planning and implementing modern VET standards is yet to be defined and to be developed in those countries. In contrary, EU- countries like the Scandinavian nations, Benelux, Ireland, Austria and Germany have a more or less developed research based tripartite preparation and decision making process of standard setting which is equally to be developed in Greece, Spain and Portugal. The UK's VET- system is led by industry (with a small input from unions) which proposes measurable benchmarks (standards) of performance in one's job. They are called "occupational standards" because they are components of occupations as well. The central and eastern European countries still lack an involvement of organised labour and employer organisations. Other countries which had no VET-standards in the past have created new institutions like the National Skill Standards Board which has been established in the USA in 1994 serving as a standard development association. We are witnessing a world-wide move towards modern VET Standards which are the backbones of new emerging systems.

2. ETF-ADVISORY FORUM AND SUBGROUP WORK

When the European Training Foundation (ETF) was established it's Advisory Forum became the bottom-up-advice-giving-body. Representatives of all EU-member states, the partner states, social partners and international agencies were given the task to define the needs of the transformation states in the field of VET and management training and advise ETF with it's future work programmes.

On the first plenary meeting of the Advisory Forum in October 1994 it was decided to establish four working groups. The Forum defined four fields of activities, that should be discussed in subgroups A-C:

VET-Financing and decentralisation (A), the role of the social partners in VET-planning (B), VET-Standards (C), the roles of key players in continuing training (D). Subgroup C was given the topic „Standards in vocational education and training" which became the most important political VET-issue since 1994 in the partner countries and EU-member states as well.

3. SUBGROUP C „VET-STANDARDS" PROCEDURE 1995 - 1997 FROM „DEFINITION" TO „IMPLEMENTATION"

Three working sessions on the topic VET- Standards were held in Subgroup C dealing with

- principles and definition of VET-standards (1995);
- VET-standard development (1996);
- VET-standard implementation (1997).

In order to ensure continuity for the Subgroup's further discussion with new members and to save time recalling earlier definitions and recommendations here is an abstract of the Subgroups most important outcomes together with short comments on alterations and amendments that have been added within the course of work:

3.1. Principles and definitions of VET- standards (1995)

It is interesting to follow — in the light of the discussion since 1995 — the definitions that were found for VET-standards. The starting basic definition read as follows

> *VET-Standards include the general description of work tasks to be carried out within the context of the profession in question, as well as an outline of relevant skills and qualifications.*

At the end of an intensive discussion the following definition was accepted by the Subgroup for further work:

> *VET-Standards are general descriptions of work tasks, which have to be practised within the framework of the relevant profession, as well as the presentation of the appropriate knowledge and skill.*

There is a common understanding that VET-standards have to be developed according to the needs of the labour market (demand-led VET-standards) and not according to the supply (education and training system, schools, workshops etc). "The labour market" is a synonym of the needs of the different sectors of the economy and particularly the needs of employers concerning specific workplaces. Representing "the labour market" are employers, trade unions and government. If, as it is the case in many partner countries, employers and unions haven't yet organised to articulate their needs in terms of VET-standards government has a difficult task: to define labour market needs which have to be met by VET-standards in such a way that they will be accepted by employers.

Most VET-systems in partner countries (and EU-member states as well) refer to "occupations" as the guiding principle for their VET-standardisation (entry requirements, characteristic of the occupation, curriculum, assessment, certification etc.). But there is no common international understanding of what an "occupation" is and how many there should be. The International Classification of Occupations (ICO) contains round about 1500. The German Vocational Education System names about 360 "training occupations", while the German Employment Office lists some 35.000 jobs. The Russian Federation, according to it's 1995 Education Law, has developed 243 training occupations, the Ukraine recently some 360. It seems to be necessary to focus on the difference between "training occupations, for which VET-standards are being developed and jobs at the workplace.

A "training occupation" comprises broad basic skills and knowledge which provide the fundamental competencies to perform in a particular job and to be able to take up life long learning.

Taking into consideration that there is no common understanding of the term "occupation" and after agreeing on a common definition of the term „VET-standards" the central point of discussion in subgroup C was whether members could agree on a small number of types of standards. This step was held necessary for the future debate among countries with very different VET systems. Finally, three archetypes were described which seemed to be covering most of the possible VET-standard development in EU and partner countries.

The **Examination or Output Model** represents a standard which merely describes the examination or qualification requirements. The preparation for such an examination is not described in that type of standard. There is no curriculum, no entry requirements, no courses or training venues mentioned. The learning process (input) is not covered by this model. There have to be examination bodies (chambers, training institutions etc.) that provide examination facilities. The UK has developed a model of assessable standards of occupational competence with it's National Vocational Qualifications (NVQ) which serves as a pilot model in other countries like South Africa and Australia. Using subgroup C's definition the UK's NVQ are an "Examination or output model" because it lacks the criteria of an "occupational model" like curricula, duration of training etc.

Models of VET-Standards

Output Model	Professional/ Occupational Model	Modular Model	Elements of Standards
	X		characteristics of the profession/occ.
	X	X	duration of training
	X	X	training objectives and content
X	X	X	examination requirements and procedure, certification

The **Occupational or professional Model** represents the broadest standard among the three archetypes. Besides the obligatory elements that are shown above the standard should outline or recommend other important components like

- students' entry qualification;

- teachers' and trainers' qualification;
- recommendations for the use of media and training aids;
- recommendations for literature and methodological advice.

The "occupational model" is used in most of the EU-VET-Systems and partner states which keep this model due to a long tradition in their countries.

The Modular Model represents a type of standards that does not follow a curricular track of two or more years like the occupational model, but it sets assessable qualification standards for certain occupational activities. These can also be part of an occupational standard, but separate qualifications with certification. The different modules can be compiled to become a comprehensive occupational qualification, if all elements of a defined occupational standard are brought together.

As an important outcome of the 1995 work session most members of Subgroup C were in favour of the occupational model. Most of the standards that have been developed within the last three years are professional/occupational standards. Some countries have developed modular standards for specialised occupational activities aside their occupational standards.

3.2. Standard Development (1996)

Subgroup C, after a long discussion about very different procedures and strategies for standard development, decided on a kind of check – list of steps to develop a standard. It was agreed that even if the procedures in the different countries would remain different a check-list would be a professional help in the context of a fundamental reform of standard development. Partner states were informed that there are no European terms of reference for VET-standard development or VET-Standards. The only EU-orientation were the five EU-levels of education, the EU-comparative studies provided by CEDEFOP and the EU-occupational classifications used by the employment offices in EU-countries. It was not looked upon to be worthwhile to find an agreement on a common level for skilled workers' qualifications. A first short discussion showed that members ranged skilled workers' qualifications from EU-level 2 to 4.

Standard Development Model Scheme (check list)

1. Commission/Application/Desires, i.e. analysis, draft, delphi;
2. Testing/Decision, i.e. testing in schools, political decision;
3. Team Formation, i.e. standard writing team formed by researchers, educators, employers, employees etc.;
4. Development Process, i.e. draft, pilot project, evaluation, first revision;
5. Submission for Decision, i.e. presentation of standard to decision makers/ ministry;
6. Decision and inacting of Standard, i.e. publishing, teacher/trainer preparation, development of learning materials;
7. Trial Stage, i.e. first implementation in a small number of pilot projects;

8. Large Scale Implementation, all schools and training institutions now inact the new standards;

9. Evaluation, analysis of performance;

10. Revision, in the light of the first experiences – after one or two training periods – the standard will be revised.

Subgroup C has worked out a detailed check-list that was thought to serve as a first aid for those who were urged into a large number of standard setting processes.

3.3. Standard Implementation (1997)

Subgroup C's next step was to work out strategies and aids for the implementation of standards. The yearly advancement of the Subgroup — 1995: definition / 1996: development / 1997: implementation — did, of course, not mirror the different stages and procedures of standard setting in the member and partner states. Most of the countries were still busy to develop their first standards when others already started the implementation. This will be the characteristic feature of VET-Standard work in the years to come in all members and partner states: parallel activities to define, develop, implement, evaluate and revise standards.

In 1997 ETF launched a „Standard 2000" pilot project which consists of a number of separate and consecutive activities:

- pilot standard projects are proposed by partner states in early 1997;
- Subgroup C discusses proposals in 1997 (Prague);
- Phare programme experts and Subgroup C exchange experiences of curriculum work (Prague);
- a Standard Development Team (SDT) is formed by Subgroup members to consult, monitor and evaluate pilot projects;
- country specific projects are launched in 1997;
- projects are to be evaluated in 1998/99;
- results are disseminated in 1998/2000.

The Standard Development Team (SDT) is supposed to render assistance to partner countries in the course of standard development and implementation and do the first steps of evaluation between the meetings of Subgroup C. One Tacis country (UKR), two Phare (CR, LAT) and two EU-countries (NL, D) formed the SDT. In the 1997 meeting of Subgroup C three countries in the framework of „Standard 2000" presented their first experiences with standard implementation (CR, LAT, SLO), three gave a short outline of their procedures (Bulgaria, Lithuania, Romania). Seven countries announced to propose pilot standard projects in 1997 (Kyrgystan, Azerbaijan, Mongolia, Russian Federation, Ukraine, Moldova and Former Yugoslav Republic of Macedonia). One result of the discussions so far confirmed what had been assumed in the first meeting of Subgroup C.

> *The VET-systems of the partner states are of very different structure and their standards show an enormous variation. They ask ETF to provide individual advice and consultancy*

to accommodate such variations – including both „top down" and „bottom up" activities – in order to achieve at least comparable procedures and framework for VET-Standards

Comparability of VET-Standards was an important issue of Subgroup C's discussion in 1997. Czech Republic (Chair: Mr. B. Janys) and Slovenia (Expert: Mr. V. Tkalec) proposed a set of indicators for comparison which was adopted by the Subgroup:

Indicators for VET-standard comparison

1. System Approach, i.e. school based, work and school based;
2. Curriculum, i.e. objectives, contents, duration;
3. Capacity of the System, i.e. schools, companies; students, teacher/trainers;
4. Financing, who pays for what?
5. Teachers/trainers, professional preparation, continuing education;
6. Understanding of VET, i.e. narrow/specialised, broad/basic, key competencies, different vocational tracks, system or programme;
7. Parity of Esteem, i.e. access to higher education;
8. Productivity of the VET-System, i.e. percentage of age cohort that is entering/leaving the system, drop-out rate;
9. Acceptance with Employers, i.e. student placement on graduation, demand of the labour market, percentage of unemployed graduates, employer involvement in standard setting.

Phare-Programme meets Subgroup C „VET-Standards". The exchange of experience between Phare- and Subgroup C-experts turned out to be very fruitful. In the course of the (older) Phare programme a large proportion of work was dedicated to curriculum development. Although the scope of projects in Phare was reaching far beyond VET-Standards there was a common understanding between the two expert groups on the functions of VET standards:

1. VET-Standards should „ensure links between vocational training and the economic sector in which participants should find work after training,"
2. VET-Standards should „ensure the compatibility of different diplomas/ certificates within a country",
3. VET-Standards should „provide qualifications which are recognisable in EU-member states."

(All citations from Bohumil Janys/Vladimir Tkalec „ Strategy and aids for the implementation of vocational standards", Prague 1997).

In all Phare projects entry requirements have been specified but it was not evident whether all Phare projects pay attention to examination requirements. Phare and Standard experts agreed in the recommendation

- that all countries should pay more attention to industry needs and to ensure linkages with the world of work by tripartite structures and research.

- that structuring curricula in a modularised way could facilitate the development of new occupational standards and the achievement of educational objectives.

4. PREPARATION OF SUBGROUP C'S 1998 TOPIC: EVALUATION/PROGRESS REVIEW

4.1. Subgroup C's 1998 topic: Evaluation/Progress Review of VET-Standards

As a result of the 1997 Advisory Forum meeting in Turin ETF decided that the topic of Subgroup C's work in 1998 would be the evaluation/review of the development and implementation of VET-Standards. The group was well aware that a review of implementation at such an early stage of the process would be able to meet the requirements of a n evaluation in the classic sense. Therefore the group recommended,that a thorough content related exercise of a standard evaluation which includes the output of VET-processes should take place at a later stage and should be carried out by independent teams of experts.

Anatolij Simak (UKR) was appointed Chairman of Subgroup C in 1998 and Hermann W. Schmidt (D) expert to the chair. Thomas Schröder (ETF) supports the Subgroup as in the years before. In a chair and expert meeting in Turin in Dec. 1997 ETF-directorate and Subgroup C chairman agreed on the following procedure to carry out Subgroup C's tasks:

4.2 Evaluation/review of the process procedure

The objective of our work in 1998 was to develop a first specific for an empirical evaluation/progress review of pilot projects for VET-Standards within „Standard 2000" covering the following areas:

1. the description of the processes of standard development and implementation with regard to Subgroup C's definitions, principles for the development and strategy recommendations for the implementation;
2. different case analysis of
   - vocational education and training pathways,
   - identification of theoretical and practical elements of standards,
   - objectives and content of standards according to the chosen model:
     - occupational/professional model, curriculum analysis,
     - modular model, curriculum analysis,
     - output/examination model, examination analysis
     - mixed model, analysis of different objectives/needs
   - examination, functions and procedures i.e. permanent assessment, intermediate/final examination, achievement in terms of levels, testing procedures for skills, knowledge, key competencies,
   - private sector participation in
     - analysing industry/labour market needs,
     - standard development and implementation,
   - standard acceptance with

- education and training institutions, i.e. schools, companies, workshops,
- students and students` parents,
- teachers/trainers,
- the public, i.e. press;

3. bilateral or international comparison of standards, i.e. between two partner countries, between one partner and one EU-country, between all partner countries with pilot projects.

4.3 To be evaluated/reviewed: Competence and performance based VET-Standards

All standard models, which have been discussed in Subgroup C — occupational, modular, output — have one characteristic in common: they are competence and /or performance based. That means that these standards define the competence and/or performance which is regarded as satisfactory for a particular occupational/professional role. Therefore, the final examination should pay high attention to the assessment of competence and performance..

The UK served as an example for performance oriented standards. With the setting of national output standards in the UK, the National Vocational Qualifications (NVQ), the following definition of standards was given:

> *„Standards are benchmarks; descriptions of the expectations of employment against which the actual performance of individuals will be compared and assessed as competent or not competent as appropriate." (Mansfield. R.(1991):Deriving Standards of Competence. In: Fennel, E. (ed.): Development of Accessible Standards for National Certification. Department of Employment, Sheffield)*

Following this definition, these standards place the emphasis not on a broad field of knowing and understanding, but only on performance, i.e. what students are able to do. Therefore standards are also expected to provide points of reference for the assessment of performance.Of course, there is criticism of such standards because there is no such thing like an absolute and objectively defined occupational role. Many car-mechanics would not agree with their job-role as it is described within a VET-standard. Because of this notion it is absolutely necessary to include researchers and as many practitioners as possible in the course of standard development in order to achieve a broad acceptance. For the evaluation process referring to practitioners` involvement is helpful as well.

4.4. Questionnaire „Evaluating /Reviewing Standards"

One questionnaire has been circulated among members of the subgroup in January 98 to evaluate the procedure of standard development and implementation in member and partner countries. The questionnaire follows results of Subgroup C's work starting with the models of standards, the development steps and the implementation procedure. The Standard Development Team agreed that the questionnaire should be short, in order to get as many answers as possible.

Nine out of fourteen partner states and six EU-member states answered the questionnaire, the results of which are shown in par. 5.3.2. The main reason for six partner states not to answer the questionnaire was the early stage of their VET-standard development work. These countries are still preparing VET-standards.

4.5. Key questions

In the course of Subgroup C's work many questions have been asked concerning the appropriate understanding of defining, setting and implementing modern VET-standards. The Subgroup has tried to develop a common methodology of „typical" procedures well knowing that this is a recommendation which has to be altered if the circumstances in a particular country make this necessary. Some questions have emerged from that debate to be **key questions** which are arising everywhere and the answers to which can help others to proceed. Some of these questions are listed below.

The following questions should be subject to discussion in order to develop a set of key questions that can be used in the evaluation/review process:

1. How have Subgroup C's recommendations for standard setting been followed and applied/changed?
2. What were the reasons to change the procedure?
3. What different steps were taken?
4. How were labour market needs/company desires taken in account in the development process?
5. Has labour market and vocational education research been involved? What was it's contribution?
6. How have teachers/trainers been prepared for standard implementation?
7. How have the standards been accepted by schools, companies, trade unions, teachers/trainers, students, the labour market, parents, the public?
8. How should Subgroup C's recommendations be revised?
9. Where are we now in this process?
10. What do we propose for Subgroup C's future work?

5. THE EVALUATION /PROGRESS REVIEW OF VET-STANDARD DEVELOPMENT AND IMPLEMENTATION

5.1. Present conditions of VET-standards in partner states

In order to adequately judge the very different situations in the countries of the former eastern bloc one must take in account, that some countries, mainly those in

- central and eastern Europe had well developed VET-systems before World War II, while others, mainly the
- New Independent States did not develop VET-systems of their own but were dependent on the central VET policy of the Soviet Union, its standards, research in methodology, textbooks etc.

But even the former eastern bloc members of central Europe have enormous problems to transform their VET-systems. As one member of Subgroup C puts it: "Since two years we are — in the frame of this group's work on standards — leading a discussion about how to set VET-standards, but until now we have only prepared a first draft. We are not used to have so many different interests to participate. We want to be up-to-date, but we also need to be realistic. Because of the very different opinions and situations in the different branches of the economy we have not yet a clear answer to many difficult questions as we have not yet tested how a new system of VET-standards works."

Although these countries have VET research capacity — which had been built up in the SU and those central European countries who belonged to the eastern bloc in the fifties and sixties of this century — they are struggling with problems that are typical for all partner states

- their VET – systems are mainly school based; the former infrastructure of public enterprises which were responsible for practical training in co-operation with VET-schools and for employing the graduates of these schools is broken apart with some relicts here and there were co-operation is still functioning or were it has already been rebuilt.
- A social partnership (employer – trade union- relation) as it is known in many European countries does not exist yet. First contacts have been built up with companies or employer organisations, but very little to none with work councils in companies or trade union representatives.
- The Russian Federation and the countries in central Europe (not the Baltic States) have a good VET-research and development infrastructure, which they can rely on when educational problems are concerned, i.e. teacher training, educational materials, curricula.

- Nevertheless, the preconditions for quick and valid labour market analysis are not the best, because of the lack of experienced labour market administration, employment offices and labour market research under conditions of a free labour market.
- General education has a long tradition and plays a major role in VET and, of course, in VET-standards. It was and is part of the educational philosophy in partner countries that the main objective of all education, general and vocational, is the development of the human personality. In addition to this educational policy issue these countries assume (by many good reasons) that major elements of general education like language, mathematics and basic knowledge of science become more and more important in all occupational and professional learning processes (especially in information and communication technology) and therefore should be a significant part of VET-curricula. The proportion of general education in many partner states equals 50 % of the total curriculum. These countries now face a problem which is well known to western VET-standard setters. From the point of view of an employer such a high proportion of general education is not necessary to be trained to a good occupational standard, although there is permanent complaint of trainers about deficiencies in reading, writing and communication skills with many trainees. As it comes to the costs which undoubtedly will be higher with such a high proportion of general education there is little hope to educate all young people to these ambitious standards even for those governments which pursue these educational objectives.
- There is little experience with market economy occupations like business and management occupations, banking, insurance, international trade which are to be introduced into VET-systems dominated by technical education. The problem is not to develop such standards (with ETF consultation) but to train teachers and trainers to these standards and to implement the standards in schools and workshops or companies.

5.2. ETF - Responses to partner state needs

ETF responded to these different needs of partner states by

- establishing information and data collecting agencies, so-called observatories, which among other data collect and provide information about the preconditions of vocational education and training like labour market needs;
- developing an expert network with procedural recommendations for the definition, development, implementation and evaluation of VET-standards through Advisory Forum members in Subgroup C;
- launching and monitoring pilot projects in partner countries;
- providing tailor made advice for countries which start to develop VET- standards for the first time;
- implementing an expert information network between partner and EU- member states through special publications.

5.3. The evaluation/review of implementation of VET –Standards

As mentioned earlier the "evaluation" as the topic of subgroup C's work in 1998 was meant to be a first review of the development and implementation process at a very early stage. All partner states, including those that are still preparing to develop VET-standards were interested to learn from others how they coped with problems of implementation. The concern of this evaluation/review was from the very beginning focussing on the process of implementation. Output and results of education and training under the new standards, assessment and certification will be subject to evaluation in the years to come. Then the classic criteria of evaluation will have to be applied: effectiveness (were the objectives achieved?), impact (has the implementation changed anything?), relevance (were the objectives meaningful in terms of labour market needs?), efficiency (were the resources invested rightly spent?) and sustainability.

5.3.1. What is to do - what can be done?

The evaluation/review of VET-standards is the topic of Subgroup C's 1998 work programme and was intensively discussed in the Kiev meeting. There were four questions identified that have to be answered in the course of evaluation/review:

- Why do we evaluate VET-Standards?
- Who evaluates?
- What do we evaluate?
- How do we evaluate?

a) Why do we evaluate/review VET-Standards?

VET- standards usually reflect the technologies, work organisations, customer orientation, the position of the national economy in global markets, internationalisation of companies, the labour market situation (national, regional, local), job classifications, emerging markets (for instance: multimedia) and other factors in the world of work. On the other hand, VET as a part of the national education system reflects the guidelines of the national VET policy. Thus, the time to evaluate VET-standards has come, when one or more of the above mentioned parameters change and a VET reform is launched. While EU-member states are evaluating their VET-standards because of the overall changes in the economy with a modernisation of existing standards and the creation of new occupations, the partner states face a radical reform of their education systems,their economies and, respectively, their labour markets, job classifications and all educational standards, including VET. The answer to the "Why" is to safeguard an overall education reform process that just has begun.

b) Who evaluates/reviews?

The most important rule of a valid evaluation is to nominate independent, knowledgeable professionals for the evaluation team who are not linked with the development or implementation of VET-standards. It is agreed that it is difficult to join independence and knowledge, especially within the ongoing process of dynamic changes and strong political pressure on the education system to hurry up with reform. Those who develop new standards and implement them usually are the most knowledgeable people in this field until the innovation has settled into an overall practice. One of the keys to solve that problem is to involve VET research from the very beginning of the development process.

c) What do we evaluate/review?

Of course, there is a very broad spectrum of factors that can be subject to VET-standard evaluation but rather at the end of the process of implementation. One could differentiate three fields of evaluation/review for our current work:

- the initiation of the process of standard setting,
- the development of VET-standards,
- the implementation of VET-standards,

and – at a later stage of the implementation –

- the effects of VET-standards with individuals, in educational establishments, in the labour market, personnel development in companies, etc.

As before mentioned the initiative for standardisation can already now be subject to evaluation. Who takes the initiative or who has the right to take such an initiative. Who nominates the evaluators? What interests are involved with the nominators and the nominees? What is subject to and the method of evaluation? Has all this been made public and known to the professional and scientific community?

In order to validly evaluate the development process it has to be made clear what components the VET-standard will consist of because different evaluation methods and standards have to be developed for these components as there are among others

- access requirements for that specific occupational track (is it open to all school leavers or does the applicant have to have a specific qualification?),
- occupation or job characteristics (main functions or tasks of that specific occupation),
- curriculum (core curriculum with additional eligible elements, method recommendations, teaching materials etc.),
- examination requirements (intermediate, final) and examination procedure (verbal, written, task performance etc.),
- teacher/trainer qualification and further education and training, especially the introduction into the new standards,
- education and training venues (schools, workshops, laboratories; companies etc.),

- the quality of the education and training process (Input quality measuring as described in the norm of the International Standard Organisation ISO 9001 or -much more difficult – output quality measuring as in the final examination and by judgement of people who employ graduates; therefore, follow up studies are needed).

These and other items can be subject of the evaluation during the development and implementation process. In addition to that the procedure of evaluation itself should be evaluated, too. This concerns the question.

d) How do we evaluate / review?

Test the reaction of those who are concerned

- the individual learner (the student, the unemployed in further education, the worker who wants to be upgraded etc.),
- the teacher/trainer who has to teach/train to the new standards,
- parents who are interested in a qualitative education of their children,
- the company that is involved in the training process,
- the employer who hires a graduate?

Although it is more expensive and time consuming than working with questionnaire interviews should be conducted in order to take advantage of the personal contact with those stakeholders in the process. The results of such evaluation studies should be discussed with some the people who have been interviewed and be published.

One of the most difficult tasks of evaluation is the measuring of the quality of the education process itself. Introducing ISO 9001 as an international norm to evaluate the performance of educational establishments does not ensure a high output quality because it evaluates the standard of the educational process, but this evaluation proves whether the educational process meets the state of the art.

When the Chair of Subgroup C, the expert to the chair and ETF decided in 1997 to circulate a questionnaire on VET-standard-evaluation among the members of the Subgroup they knew that the standard setting process was at very different stages in partner and EU-member states. Taking in account that there was a very short time frame before the next meeting they formulated a short questionnaire which was thought to disclose first experiences from that very interesting process of standardisation. The following chapter shows the results.

5.3.2 Results of the 1998 questionnaire on VET-standard evaluation/progress review

Again it must be stated clearly that the emphasis of this questionnaire at this stage of the process of VET-standard development and implementation was put on the progress that partner and member states have made in the transformation/modernisation of their VET – standards. It is to early to investigate on the impact of VET-standards on the labour, on companies' strategy to hire people or on individual careers.

Questions and Answers

a) Which VET system is typical for your country?

Answers	Partner countries	Member states	All
• school/theory & practice / work experience in companies (internship)	8 (89%)	6 (100%)	14 (94%)
• school with theory & practice	2 (21%)	2 (33%)	4 (27%)
• school (only theory)	-	-	-

School based VET systems are prevailing in partner and EU-countries. They mostly comprise classroom teaching (theory) with practical demonstrations (teacher centred) and the performance of work tasks (learner centred) in workshops, cabinets and laboratories. Although dual education and training systems do not exist in partner countries, as they do in some EU member states (i.e. Austria, Denmark, Germany, Netherlands), most VET systems include practical work experience in private or public enterprises (internships).

b) Which VET standard model did you choose?

Answers	Partner countries	Member states	All
a) the "occupation model"	3 (33%)	3 (50%)	6 (40%)
b) the "module model"	-	-	-
c) the "output model"	1 (11%)	-	1 (7%)
d) a "mixed model"			
• (a) + (b)	4 (45%)	2 (33%)	6 (40%)
• (a) + (c)	1 (11%)	-	1 (7%)
• "decentralised model"	-	1 (17%)	1 (7%)

The traditional VET standard model in Europe — east and west — is the "occupation model" which can also be described as the "education track model" or as the "input-process-output model". It comprises obligatory elements like

- access requirements,
- occupation characteristics,
- an education and training curriculum with a time frame, learning objectives, the description of contents and tasks to be preferred (input) in the learning process,
- examination requirements (output),

and voluntary elements and recommendations like

- teacher/trainer education and training,
- methodological repertoire,
- education aids/material, multimedia,
- minimum equipment of workshops, etc.

Although most partner and member states name the "occupation model" traditional or inherited they have decided to keep the model but modernise it, restructure and broaden their occupation concept and set new VET standards. For partner states this decision means much more than modernisation of existing occupational standards. They have to develop new occupational classifications that serve the needs of a market economy and individual expectations for employment. Since the "occupation model" needs a time frame of three to five years to react upon fundamental changes in technology and work organisation they flexibilise their "occupation model" by introducing a "module model" in addition to the occupational model. This model combines a syllabus of performance based learning objectives with examination requirements for short term (2 months to one year) training periods and qualifications. These modules can be put together to a broad qualification. Also some EU members state that the "occupation model" being mixed with the "modular model" makes their VET systems more flexible and is used to respond to short term labour market needs. On the other hand the "modular model" lacks the advantages of the "occupation model": individual identification with the occupation or profession which gives status in society, ensures a specific income in the frame of collective bargaining agreements, ensures a specific level of social security and permits to market ones qualification on regional or national labour markets were the "occupation model" is practised.

c) Who took the initiative for VET standard setting?

It is the ministry of education which takes this initiative in 2/3 of partner and EU states. Other ministries (labour, economy), schools or research institutes have also taken the first step. Social partners take the initiative only in some EU countries but not in partner states. Their role as a partner for government in VET planning processes has to be developed yet.

d) What were your steps in the development process?

8 steps had been described by ETF Subgroup C in 1996 as a kind of check list for VET standard development.

	Partner countries	Member states	All
1) demand analysis	6	6	12
2) international comparison	8	3	11
3) bench marking to international standards	6	3	9
4) deficit analysis of existing standards	6	3	9
5) deficit analysis of new standards	8	5	13
6) development of 1st draft	9	6	15
7) experts discussions	7	4	11
8) revision, 2nd draft	1		1

Obviously partner states used the check list as a procedural recommendation for new paths in standard setting whereas EU member states more often followed other, more traditional ways.

e) What do you do while implementing standards?

⇒ ***Evaluate the acceptance with***

	Partner countries	Member states	All
• teachers	9 (100%)	4 (67%)	13 (87%)
• students	4 (45%)	1 (17%)	5 (34%)
• parents	2 (14%)	1 (17%)	3 (20%)
• companies	8 (89%)	-	8 (60%)
• trade unions	2 (22%)	5 (84%)	7 (47%)
• employers organisations	6 (67%)	5 (84%)	11 (74%)
• labour market	7 (78%)	2 (34%)	9 (60%)

Partner states test the acceptance of new VET standards primarily with their schools, with teachers and students, and local companies while EU countries practice their tripartite VET partnership with employer organisations and trade unions to assess new VET-standards. "The labour market", usually represented by the department of labour and employment offices, is an important partner for the assessment of new VET standard for seven out of nine partner states while in the EU this is only the case with 2 out of 6.

⇒ ***Preparation for education and training***

Two third of all members in east and west develop teaching materials along with VET standards. These aids are looked upon as an effective tool for implementation.

All countries name teacher training as the most important factor for successful implementation, but due to time pressure more than 90% train teachers in the course of introducing standards and not before.

Only one third of members revise and work a second draft standard before implementation.

f) ***When does the first revision take place?***

The lack of experience may be the reason why the answers vary between one and five years with most answers (4) on the five year term. One EU member revises "on request".

⇒ ***What is the duration of a VET curriculum?***

Answer	Partner Countries	Member states	All
• One year	2 (22%)	1 (17%)	3 (20%)
• Two years	2 (22%)	3 (50%)	5 (34%)
• Three years	6 (67%)	5 (84%)	11 (74%)
• More than three years	5 (56%)	3 (50%)	8 (54%)

All countries have VET tracks of different duration, but a significant proportion of more than 2/3 offer long term VET tracks of three and more years.

g) ***Did you refer to the five categories of VET-standards which Subgroup C has defined?***

Answers	Partner countries	Member states	All
• access requirements	9 (100%)	2 (34%)	11 (74%)
• curriculum	9 (100%)	3 (50%)	12 (80%)
• examination requirements and procedure	9 (100%)	3 (50%)	12 (80%)
• educational tools and media	8 (89%)	3 (50%)	11 (74%)
• teacher training	9 (100%)	3 (50%)	12 (80%)

All countries have proved to take these 5 categories into consideration in the process of setting and implementing new VET standards. 3 EU member states did not fill in answers to these questions at all, but in discussions they affirmed that these categories also apply to their understanding of VET-standards.

6. PRESENTATION OF CURRENT ACTIVITIES IN 4 COUNTRIES: RUSSIAN FEDERATION, UKRAINE, FORMER YUGOSLAV REPUBLIC OF MACEDONIAN AND GERMANY

While planning the 1998 meeting of Subgroup C ETF and the Standard Development Team originally thought of the presentation of four pilot projects of VET-Standards in the four countries. Later on it seemed to be more interesting to hear about the overall VET reform policy in the Russian Federation and Ukraine following the recent basic educational legislation which sets the frame for a new understanding of VET-standards in these countries. The former Yugoslavia Republic of Macedonian introduces an interesting method of standardisation with a focus on quality assurance and Germany presents VET-standard-setting procedures and standards in an emerging labour market (information and communication technology).

6.1. Russian Federation (RF)

The process of VET-standard setting in the RF has reached a new dimension after the "Russian Federal law on Education" from 1996 was enacted.

This law introduced "State education standards" for all sectors of education, especially for four levels in the field of VET (article 9)

1. primary vocational education;
2. medium vocational education;
3. higher vocational education;
4. post-graduate vocational education.

The responsibility of the Russian Federal Government is to

- establish an occupational classification;
- establish federal elements of state education standards; and
- ensure the federal elements in state education standards.

This is a very new issue of federal policy because for the first time the central government

- sets a core national VET-standard which gives room to the regions and educational establishments to set additional standards to their needs "within the boundaries established by the laws of the RF", and
- gives educational establishments the responsibility to draw up and approve educational programmes and curricula.

The ministry of education has developed VET standards ("federal elements") for 263 occupations which are to be finished and completed within the regions. Most occupational standards are in the development and implementation process.

6.2. Ukraine (UKR)

The new Ukrainian Vocational Education Act (UVEA) has recently passed parliament with all political parties backing the overall VET concept, but also especially the Ukrainian concept of VET standards:

> *"A state standard of vocational education" ("vocational and technical education") contains the overall state requirements concerning the contents of training, the qualification level, ..., the fundamental compulsory training resources and the educational level of the graduate. According to this, state standards are developed for each occupation which is contained in the "inventory of occupations for the training, of skilled workers in vocational schools". (UVEA, article 33)*

In the meantime standards have been set up or are in the process to be set up for round about 240 occupations. Ukrainian VET standards comprise

- an occupational profile;
- an occupational framework syllabus;
- framework syllabi for subjects and practical training;
- examination requirements and performance criteria;
- a list of binding education and training tools;
- requirements for the educational level of the school leaving certificate;
- qualification level of teachers/trainers.

The VET standard for "office secretariat referent" which has been developed as a pilot project in the frame of the ETF sponsored "Standard 2000" programme is one of the first standards that meets the new legal criteria.

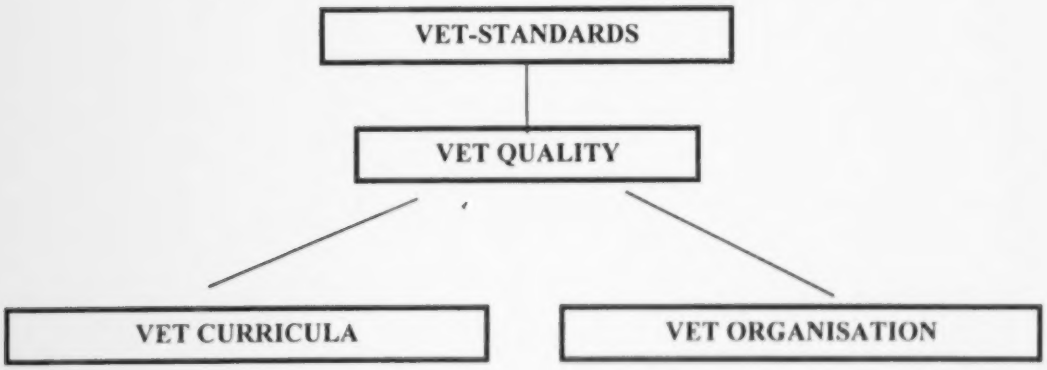
6.3. Former Yugoslav Republic of Macedonian (FYRM)

VET standard development is part of the overall VET reform in FYROM. With support of ETF pilot project "Standard 2000" a standard development team has designed a concept for VET standards and developed five VET standards for the hotel, restaurant and catering industry that are implemented in 1998.

The philosophy underlying the FYROM concept takes four parameters into consideration in order to develop VET standards:

- labour market;
- education policy;
- personal needs of the individual; and
- educational institutions.

Job description and job design are mirrored in national labour market needs. These factors determine widely the new VET standards. Curriculum development for specific occupational and new VET school organisation and methodology are to ensure the quality of delivery. Thus, the VET reform is governed by a set of networking measures within this triangle.



The FYRM pilot project introduced a well elaborated input-performance-output model for VET standard development and implementation consisting of eight components which gave a clear inside view on the FYROM laboratory work of VET reform.

A very interesting feature of the FYRM project is the introduction of quality measurement for the educational process by using the norm ISO 9001 of the International Standard Organisation which is used in many countries to safeguard quality in education. I t will be of major importance for the future procedure in quality assurance to hear from FYRM about the results of this kind of evaluation.

6.4. Germany

The development and implementation of the standards for four information technology (IT) occupations in Germany within the last two years were presented as an example for the reform of the standard setting process and the occupational classification within the dual system of education and training in Germany:

- IT electronics technician;
- IT system support specialists;
- IT specialist;
- IT officer.

Not only these occupations are new (and not just re-named older occupations) but the mechanism of developing and implementing the new standards has changed tremendously. Government, employer organisations, trade unions and VET research are under heavy pressure of the public opinion and enterprises to develop new VET occupations according to the new needs, with global players, but also fast growing small businesses in emerging markets like IT, multi-media, microtechnology and all kinds of services.

The initiative to develop these new IT-occupations was taken by the employer organisation of the electronic industry and the metal workers' union. In a tripartite team, together with research support from Federal Institute for Vocational Training, the four standards were developed within nine months. It took 16 months from the initiative to the beginning of training on 1 August 1997, a record in such a planning process. Although companies and schools complained about the short preparation period round about 1,000 companies concluded some 4,200 training contracts and some 400 VET schools offered education for these trainees in 1997. Some 20.000 additional training places are expected by employers until the year 2000.

In the course of the reform more than 150 standards have been modernised and some 25 standards for new occupations have been introduced into the system.

7. KEY QUESTION: HOW TO MEASURE LABOUR MARKET NEEDS?

The meeting of ETF Subgroup C "VET Standards" in Kiev brought a vivid and fruitful discussion on crucial points which arise in the course of standard setting and implementation. In an interesting dialogue with ETF Director Peter de Rooij all members of the Subgroup stated that

"ETF Subgroup C's work like recommendations, concepts and proposals are undismisable for their work on VET standards at home."

As one of the most difficult questions in the beginning of a VET standard-setting process group members identified the following problem:

> *How are labour market needs measured to be long-term, broadly based in the economy and not a local or particular company need and - speaking in terms of occupational skills and knowledge, attitudes and capabilities - broad enough to fill at least a two to three year curriculum, if you want to meet the requirements of level three in the EU set of educational levels (unskilled; semi-skilled; skilled worker/employee; technician; academic profession)?*

Different ways to measure labour market needs were mentioned but not thoroughly discussed. Just to keep in mind what criteria and facts have been touched on in Kiev some of the main points are listed in the following:

7.1. Partners for VET planners and educators in the labour market

- **Ministry of Labour, employment offices and similar agencies:**

  statistics on employment and unemployment in the different sectors of the economy and within different occupations; structure of unemployment (unskilled/skilled, etc.), demand for skilled personnel in the different sectors of the economy etc.

- **Employer organisations, trade unions, companies:**

  skill needs from an employer's or unionist's point of view; trends of employment on different levels (skilled/unskilled); future needs - union/employer contribution to future job descriptions and workers'/employees' roles, job designs in emerging markets like multimedia, genetic technology, information technology etc.

- **Labour market and VET research**

  analysis of labour market structure; local or regional labour market needs; statistical comparisons, international comparisons; skill bench marking - national and international; ranking of labour market needs on different levels of education, emerging markets etc.

7.2. Tracing needs for new occupations in emerging labour markets

Information and communication, multimedia, microtechnology-industries, foreign languages, customer orientation, different service industries, especially health care, belong to the most dynamic sectors of the economy and labour markets with a high potential for new VET-standards.

In order to establish an "early-bird-system" for VET-standard-initiatives one could have

- **analysis of job advertisements** (offer and demand);
- **analysis of further education and retraining measures**
  - in companies (because of changes in work organisation, etc.),
  - with chambers and employer organisations (regional and sectoral needs), with private education and training providers (where there is a market, there is a need);
- **analysis of job changes of individuals within the workforce;**
- **hiring practice s of "young" companies in new emerging markets etc.**

8. RECOMMENDATIONS FOR SUBGROUP C'S 1999 AGENDA

As indicated in par. 7 the most difficult problem in all countries is how to measure labour market needs when there is a lack of experienced partners like employer organisations and trade unions which are able to define clearly to the education sector what their skill needs are. Even in EU-member states with a long tradition of social partnership problems arise when it comes to describe the skill needs in emerging labour markets like information technology, multimedia etc. For partner states the problem is much more complicated because research mechanisms that were used to rely on totally different economic and labour market systems are still adapting to the new structures of a market driven economy and labour market which are still in a transformation process themselves. In this unique historic development there are very different answers to the question how to prepare the young workforce best for a future economy and labour market. How to build a network of reliable employers and unionists to co-operate with in designing new VET-Standards? How to establish an expert network to find out about changes in the world of work that have to be taken into consideration while designing a curriculum? How to develop a labour market analysis for VET-standard purposes?

These and other questions have to be answered in the coming years in order to develop and adapt VET-standards according to the changes in technology and in the economy, the changes in society and in learning attitudes of the young generation and many other factors that have to be taken into consideration in this process.

Subgroup C proposes for it's 1999 work period the topic "What Impact has the Labour Market on VET-Standards and what are the consequences for Vocational Education and Training?"